

AMENDMENTS TO THE CLAIMS

This listing of the claims replaces all prior versions and listing of the claims in the present application.

Listing of Claims

1. (currently amended) A method for performing admission control in order to offer assurances on forwarding quality in networks comprising the steps of:

setting a threshold for each link where said threshold defines a maximum sum of forwarding resources requested by applications for their application data flows, ADFs, on the link, ~~characterised by;~~

choosing the level of said threshold by utilising knowledge about multiplexing properties of the ADFs on each link and by utilising knowledge about the forwarding resources of the links; and

controlling admission to each link based on the threshold.

2. (original) A method according to claim 1, characterised by the further step of utilising knowledge about the traffic mix of different ADFs on each link when choosing the levels of said thresholds.

3. (previously presented) A method according to claim 1, characterised by estimating multiplexing properties of different ADFs off-line, said estimation being based on results from preparatory tests of recorded samples of ADFs, which are expected

on a link and use this estimation when choosing the level of said threshold.

4. (original) A method according to claim 3, characterised by further using assumptions on user behaviour and application configurations for the estimation.

5. (previously presented) A method according to claim 1, characterised by setting an initial threshold for each link and repeatedly, during usage, measuring multiplexing properties of aggregated ADFs online on each link and use these measurements to dynamically adapt said thresholds during usage.

6. (previously presented) A method according to claim 5, characterised by choosing the initial threshold estimating multiplexing properties of different ADFs off-line, said estimation being based on results from preparatory tests of recorded samples of ADFs, which are expected on a link and use this estimation when choosing the level of said threshold.

7. (currently amended) A method according to claim 5, characterised by performing the measurements at at least two different rates.

8. (currently amended) A method according to claim 7, characterised by measuring at a first rate, which is equal to or lower than the amount of allocated resources on the link and measuring at a second rate, which is lower than the first rate.

9. (original) A method according to claim 8, wherein the second rate is dependent on the reserved resources on the link and the threshold.

10. (previously presented) A method according to claim 7, characterised by

increasing the threshold when both the measurement at the first and second rates indicate lower loss-rates than what is assured;

decreasing the threshold when both the measurement at the first and second rates indicate higher loss-rates than what is assured; and

maintaining the threshold when the measurement at the second rate indicates higher loss-rate than assured and the measurement at the first rate indicates lower loss-rate than assured.

11. (previously presented) A method according to claim 5, characterised by introducing a measurement threshold, which defines a level of forwarding capacity reservations on the link above which the measurements are initiated.

12. (original) A method according to claim 11, characterised by increasing the measurement threshold in steps but not over a predefined maximum level which is lower than the level of allocated resources of the link when the measurement at the second rate indicates higher loss-rate than assured and the measurement at the first rate indicates lower loss-rate than assured.

13. (previously presented) A method according to claim 8, characterised by measuring at a third rate, which is higher than the first rate but equal to or lower than the allocated resources of the link when the measurement at the first rate indicates a higher loss rate than assured, the loss rate measured at the third rate being indicative of if it is necessary to pre-empt ADFs from the link or if it is enough to prevent new ADFs from entering the link.

14. (previously presented) A node in a network comprising software for performing admission control in order to offer assurances on forwarding quality in networks and software for setting a threshold for each link, said threshold defining a maximum sum of forwarding resources requested by applications for their application data flows, ADFs, on the link, characterised in that said node further comprises software for performing the method in claim 1.

15. (previously presented) A node in a network according to claim 14, characterised in that it comprises or is connectable to a measuring means adapted to perform measurements on the links.

16. (currently amended) A computer program product directly loadable into the internal memory of a processing means within a computer placed in a node, the computer program product being embodied in a medium readable by the computer and comprising the software code means for performing the steps of claim 1.

17. (currently amended) A computer program product ~~stored on a computer usable~~ embodied in a computer-readable medium, comprising a readable program for causing a processing means[[,]] to control an execution of the steps of claim 1.

18. (original) A node in a network, said node comprising admission controlling means (14;14') adapted to perform admission control in order to offer assurances on forwarding quality in networks, said admission controlling means (14;14') comprising threshold setting means (16;16') adapted to set a threshold for each link, said threshold defining a maximum sum of forwarding resources requested by applications for their application data flows, ADFs, on the link, characterised in that said threshold setting means (16;16') further is adapted to utilise knowledge about multiplexing properties of the ADFs on each link and knowledge about forwarding resources of the link when choosing the level of said threshold.

19. (original) A node according to claim 18, characterised in that the threshold setting means (16;16') further is adapted to utilise knowledge about the traffic mix of different ADFs on each link when choosing the levels of said thresholds.

20. (previously presented) A node according to claim 18, characterised in that the admission controlling means (14) comprises estimating means (18) connected to the threshold setting means (16), said estimating means (18) being adapted to retrieve results from preparatory tests of recorded samples of

ADFs expected on a link and estimate multiplexing properties of these ADFs off-line, said estimating means (18) further being adapted to forward the estimation to the threshold setting means (16) , which is adapted to use the estimation for choosing the level of said threshold.

21. (original) A node according to claim 20, characterised in that the estimating means (18) further is adapted to use assumptions on user behaviour and application configurations for the estimation.

22. (previously presented) A node according to claim 18, characterised in that the threshold setting means (16') is adapted to set an initial threshold for each link and in that the admission controlling means (14') comprises a measurement requesting means (20), which is connected to the threshold setting means (16') and adapted to retrieve measurements from a measuring means (22) in the network, which is adapted to repeatedly, during usage, measure multiplexing properties of aggregated ADFs online on each link, and in that the threshold setting means (16') is adapted to use these measurements to dynamically adapt the thresholds during usage.

23. (canceled)

24. (currently amended) A node according to claim 22, characterised in that the measurement requesting means (20) is adapted to retrieve measurements performed at [[at]] least two different rates.

25. (original) A node according to claim 24, characterised in that the measurement requesting means (20) is adapted to retrieve a measurement performed at a first rate, which is equal to or lower than the amount of allocated resources on the link and retrieve a measurement performed at a second rate, which is lower than the first rate.

26. (original) A node according to claim 25, characterised in that the measurement requesting means (20) is adapted to retrieve a measurement performed at a second rate, which is dependent on the reserved resources on the link and the threshold.

27. (previously presented) A node according to claim 24, characterised in that the threshold setting means (16') is adapted to

increase the threshold when both the measurement at the first and second rates indicate lower loss-rates than what is assured;

decrease the threshold when both the measurement at the first and second rate indicate higher loss-rates than what is assured; and

maintaining the threshold when the measurement at the second rate indicates higher loss-rate than assured and the measurement at the first rate indicates lower loss-rate than assured.

28. (previously presented) A node according to claim 22, characterised in that the measurement requesting means (20)

comprises a measurement threshold means (24) adapted to define a level of forwarding capacity reservations on the link above which the measurements should be requested.

29. (original) A node according to claim 28, characterised in that the measurement threshold means (24) is adapted to increase the measurement threshold in steps but not over a predefined maximum level which is lower than the level of allocated resources of the link when the measurement at the second rate indicates higher loss-rate than assured and the measurement at the first rate indicates lower loss-rate than assured.

30. (previously presented) A node according to claim 25, characterised in that the measuring requesting means (20) is adapted to retrieve a measurement at a third rate, which is higher than the first rate but equal to or lower than the allocated resources on the link when the measurement at the first rate indicates a higher loss rate than assured, the loss rate measured at the third rate being indicative of if it is necessary to pre-empt ADFs from the link or if it is enough to prevent new ADFs from entering the link.